What is claimed is:

1. A biaxial linear-revolving guide unit; comprising a pair of linear motion guide units each composed of a guide rail and a slider fit over the guide rail for linear movement relative to the guide rail, and a revolving bearing installed between the linear motion guide units to joint them for revolving movement relative to one another;

wherein the revolving bearing is comprised of an inner ring, an outer ring fit over the inner ring for revolving movement relative to the inner ring, and a rolling element installed between the inner and outer rings; and

wherein any one of the inner and outer rings is joined directly at any one of axially opposite ends thereof to the slider of any one linear motion guide unit while the other of the inner and outer rings is joined directly at any one of axially opposite ends thereof to the slider of the other linear motion guide unit.

2. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein the paired linear motion guide units are a first linear motion guide unit composed of a first guide rail and a first slider, and a second linear motion guide unit composed

of a second guide rail and a second slider.

3. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein a space adjuster to regulate a clearance between the linear motion guide units is provided is provided on a surface of the slider, which faces any one of axially opposite mating surfaces of the revolving bearing.

4. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein any one of the inner and outer rings is joined by more than one fastening bolt together with the mating surface of any one slider, which is a side opposite to other side that faces the associated guide rail.

5. A biaxial linear-revolving guide unit constructed as defined in claim 4, wherein more than one fastening bolt is four in number.

6. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein the inner ring of the revolving bearing is made with a counter-bored hole into which a fastening bolt fits to join the inner ring to any one of the sliders while the outer ring of the revolving bearing is made with a threaded hole into which a threaded bolt, after having extended through a hole in the other slider, fits to fasten the outer ring to the other slider.

7. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein the revolving bearing is constituted with a crossed-roller bearing composed of the inner ring, outer ring and more than one rolling element, which are all assembled into an integral construction.

8. A biaxial linear-revolving guide unit constructed as defined in claim 7, wherein the crossed-roller bearing is constructed in such a way that the inner ring fits into the outer ring to shift one another in an axial direction, whereby a mounting surface of the inner ring facing onto a mating surface of the first slider is raised above the outer ring while a mounting surface of the outer ring facing onto a mating surface of the second slider is raised above the inner ring in an axially opposite direction.

9. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein any one of the guide rails is joined to a bed of rectangular configuration while the other is joined to a table of rectangular configuration.

10. A biaxial linear-revolving guide unit constructed as defined in claim 9, wherein the guide rail to be joined with the table is made with a threaded hole and a fastening bolt, having passing

through a hole in the table, fits into the threaded hole.

11. A biaxial linear-revolving guide unit constructed as defined in claim 9, wherein the linear motion guide unit joined to the table is combined with a driving means for position control of the slider.

12. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein the linear motion guide unit has the guide rail made in a U-shape in transverse section of sidewise opposing side walls joined together with a bottom wall, and the slider fit for linear movement between the side walls of the guide rail.

13. A biaxial linear-revolving guide unit constructed as defined in claim 1, wherein the linear motion guide unit has the guide rail of rectangular shape in transverse section, and the slider fit for linear movement over the guide rail.

14. A biaxial linear-revolving guide unit constructed as defined in claim 9, wherein the bed and the table each have a surface of reference, which is used to locate accurately the guide rail of the associated linear motion guide unit, and wherein the surface of reference is constituted with either a side surface of reference inside a groove cut into any one

of the bed and the table or any one of a fixed block and a fixed pin of reference, which is fastened to any one of the bed and the table.

15. A table system; including a biaxial linear-revolving guide unit composed of a pair of linear motion guide units each having a guide rail and a slider allowed to move relative to the guide rail, and a revolving bearing installed between the linear motion guide units to allow the linear motion guide units to turn relative to one another;

wherein the revolving bearing is composed of an inner ring, an outer ring fit for circular movement into the outer ring, and a rolling element installed between the inner and outer rings;

wherein any one of the inner and outer rings is joined directly at any axial end thereof to the slider of any one of the linear motion guide units while the other is joined directly at any axial end thereof to the slider of the other linear motion guide units;

wherein more than one biaxial linear-revolving guide unit is installed between a table of rectangular configuration and a bed of rectangular configuration in opposition to the table; and

wherein the bed is provided thereon with a first X-axis installation area where any one of the linear

motion guide units is joined to the bed with the guide rail thereof extending in an X-direction, and a first Y-axis installation area extending in a Y-direction normal to the X-direction, while the table is provided thereon with a second Y-axis installation area where the other linear motion guide unit is joined to the table with the guide rail thereof extending in the Y-direction normal to the first X-axis installation area, and a second X-axis installation area extending in the X-direction normal to the first Y-axis installation area.

16. A table system constructed as defined in claim 15, wherein a pair of the first X-axis installation areas is provided on the bed in such a way spaced away from one another in the Y-direction while a pair of the second X-axis installation areas is provided on the table in such a way spaced away from one another in the X-direction, and wherein the guide rails of the linear motion guide units fit in the first and second X-axis installation areas, one to each area.

17. A table system constructed as defined in claim 15, wherein the first Y-axis installation area is in line in the Y-direction on the bed while the second Y-axis installation area is in line in the Y-direction on the table, and wherein the guide rails of the paired

linear motion guide units fit in the first and second Y-axis installation areas, one pair to each area.

18. A table system constructed as defined in claim 15, wherein the first X-axis installation area, second X-axis installation area, first Y-axis installation area and second Y-axis installation area each have a surface of reference, which is used to locate the guide rail of the associated linear motion guide unit, and wherein the surface of reference is constituted with either a side surface of reference inside a groove cut into any one of the bed and the table or any one of a fixed block and a fixed pin of reference, which is fastened to any one of the bed and the table.

19. A table system constructed as defined in claim 15, wherein the linear motion guide unit installed on the bed is comprised of the guide rail made in a U-shape in transverse section of sidewise opposing side walls joined together with a bottom wall, and the slider fit for linear movement between the side walls of the guide rail, while the other linear motion guide unit is composed of the guide rail of rectangular shape in transverse section, and the slider fit for linear movement over the guide rail.

20. A table system constructed as defined in

claim 15, wherein of the linear motion guide units installed on the bed, three the units are combined with the driving means, one to each unit, to force the table towards any desired location relative to the bed.

21. A table system constructed as defined in claim 19 wherein the three driving means serves as a first X-axis driving means, a second X-axis driving means and a Y-axis driving means, respectively, which are selectively actuated to control not only an amount of movement but also a direction of movement of the table, thereby getting the table to move relative to the bed towards any desired location in any of X-direction moving mode, and Y-direction moving mode, or askew moving mode in XY-coordinates, turning mode on its center axis and angular shift mode on an axis of moment vector in XY-coordinates.